Philips Medical Systems

NEWSLETTER				Service
Issued by	: PMSN Best	**Reference No.**	: XRD-BEST 240	
Publication No	: 4522 981 49821	**Date**	: November 2003	

Service Tools Newsletter

No. 49

Subject: mAs meter

RECOMMENDATION AND WORLD-WIDE CONTRACT:

MAS METER

- **MODEL 714-PMS**

FROM UNFORS

The Tools Newsletter is for internal Philips use only. Issued by Customer Lead Office Tools. Best, The Netherlands. E-mail: helpdesk.pmstools@philips.com

(c) 2003 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED

1 INTRODUCTION 3

2 THE UNFORS MULT-O-METER 714 FOR PHILIPS MEDICAL SYSTEMS 3

2.1 Configuration 3

2.2 Ordering information 4

2.3 Prices: 4

2.3.1 Euro currency prices 4

2.3.2 USD currency prices (for US/Canada only) 4

2.3.3 Calibration prices 4

2.4 What do I need to know further? 5

3 SPECIFICATIONS 5

3.1 mAs Meter 714-PMS Specifications 5

4 UNFORS APPLICATION INSTRUCTION 6

4.1 Unfors Mult-O-Meter Setup – mAs 714-PMS 6

5 ANY QUESTIONS OR SUGGESTIONS TO IMPROVE 7

(c) 2003 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED

1 INTRODUCTION

Remarks made by the PMS Tool Correspondent Network have led to the introduction of a new mAs meter. This Unfors mAs meter (model 714) is more user-friendly and cost-effective than the model PMS has been using up till now, the Nuclear Associates model 07-487DT.

Unfors Mult-O-Meter 714 highlights:
- Auto-range, from 0,1 – 9999 mAs
- Auto-reset
- No necessity to select AC / DC mode
- Fits inside Unfors cases
- Calibrated at same places as other Unfors meters (438-PMS / 579-PMS etc)
- Possible future infrared (IR) connectivity, can be used with same software as other Unfors models
- Special discount on purchase and calibration prices (world-wide contract)

2 THE UNFORS MULT-O-METER 714 FOR PHILIPS MEDICAL SYSTEMS

Updated contract:
As a result of the recommendation a special package, the "**Unfors 714-PMS**" will be made available for Philips Medical Systems. This instrument will be added to the already existing world-wide contract with Unfors. (contract period 1-11-2003 until 31-07-2004)

2.1 CONFIGURATION

Unfors 714-PMS	Unfors Mult-O-Meter 714, invasive mAs meter Standard accessories: - User manual - Short version manual - Calibration certificate - 1 m cables ("banana" type connectors)
Unfors QA Case 1:	Transportation case with place for meter, cables, certificates, manuals, space for optional IR-accessories

(c) 2003 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED

2.2 ORDERING INFORMATION

The Unfors 714-PMS is ordered via your local purchase office directly at the nearest Unfors Sales Office or at a specified Unfors representative.
An overview of the Unfors Sales Offices or selected Unfors representatives can be found at the Unfors contact website → http://www.unfors.com/contact.php

PHILIPS SERVICE LOGISTICS:
It is also possible to order the model 714-PMS at Philips Service Logistics International (Best). Bear in mind that the price will be slightly higher than the ones mentioned below.

Unfors 714-PMS:	12nc = 4522 300 20571
Unfors ordernumber:	1501024
Description:	714-PMS mAs Mult-O-Meter

2.3 PRICES:

2.3.1 EURO CURRENCY PRICES

Unfors 714-PMS	single unit:	€ 605

2.3.2 USD CURRENCY PRICES (FOR US/CANADA ONLY)

Unfors 714-PMS	single unit:	$ 635

2.3.3 CALIBRATION PRICES

Calibration is performed by Unfors Instruments AB, Billdal, Sweden. For the US and Canada this is K&S Associates Inc. in Nashville, Tennesse, USA.

Unfors 714-PMS	Price / pcs:	€ 93
	3 year calibration contract:	€ 257
	3 year calibration contract + 3 year extended warranty:	€ 513

$ pricing information of the authorized calibration facility at K&S is offered separately to the SSR NA.

(c) 2003 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED

2.4 WHAT DO I NEED TO KNOW FURTHER?

Tool Catalogue:
The mAs meter Unfors 714-PMS will be present in the on-line Tool Catalogue. The Toolcode is TC089.

Direct link → http://technet.best.ms.philips.com/applications/tc_pms/html/pk1_208/1_208.html

When available?	Starting 01-11-2003 your order can be placed at the nearest Unfors Sales Office or selected representative
Price validity:	The prices in this newsletter have a validity of 12 months
Delivery:	4 weeks after receipt of the order by the selected Unfors Sales Office
Warranty:	1 year (or 3 year extended warranty, see 2.3.3)
Repair / Calibration:	Via your local Unfors representative or via Service Logistics International (Best)
Training:	Specific training is not needed. The mAs meter is designed with the aim to make the measurements simple and straightforward. In case of questions please contact your local Unfors representative or the helpdesk pmstools

3 SPECIFICATIONS

3.1 MAS METER 714-PMS SPECIFICATIONS

mAs range:	0,10 – 9999 mAs, auto ranging / inaccuracy ±2%
mA range:	0,3 – 2000 mA, auto ranging / inaccuracy ±2% or ±0,05 mA
Bandwidth:	Rad (switch in “R” position) 500Hz, 3dB Fluoro (switch in “F” position) 5Hz, 3 dB
Voltage protection:	Limited to 75V

(c) 2003 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED

4 UNFORS APPLICATION INSTRUCTION

4.1 UNFORS MULT-O-METER SETUP – MAS 714-PMS

Caution:
Users of Unfors mA/mAs meters must be aware of the potential damage to generators and electrical human hazards in the case of improper connection or failure of any part of the meter circuit. This Mult-O-Meter with mA/mAs option is intended for use only by personnel authorized in performing calibration and repair of X-ray equipment.

Measurement of mA and mAs

1. Make sure the X-ray generator is switched OFF.
2. Remove the jumper from the X-ray generator mA/mAs socket. Connect the black and red banana cable to the mAs-socket, see figure 1.
3. Connect the black and red banana cable to the Mult-O-Meter mA/mAs input, correspondingly. Place the Mult-O-Meter on a non-grounded surface. This to avoid ground currents that could affect the measurement accuracy.
4. For tomographic low current exposures (mA < 5 mA), set bandwidth switch to "F" position. For radiographic exposures, set to "R" position. See figure 2.
5. Switch ON the X-ray generator and then the Mult-O-Meter.
6. Make exposures and read measured values in the Mult-O-Meter display. Note: X-ray generator may have inverted polarity at the mAs socket. If results are fully out of range, try swapping the red and black cable.
7. Caution! After the measurements are finished, do not forget to insert the mA/mAs jumper when removing the black and red banana cable.

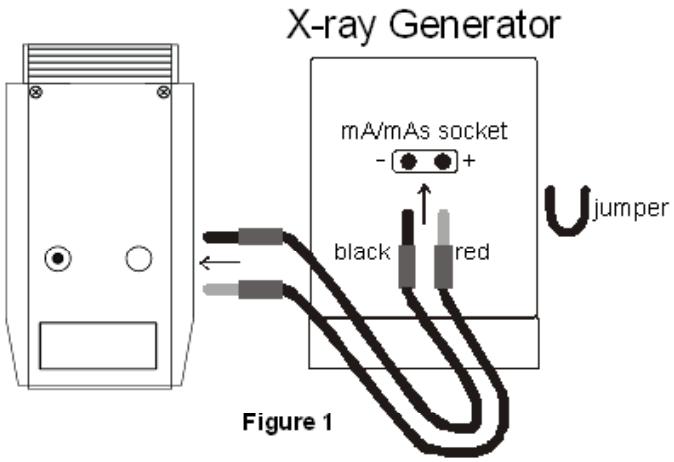

Figure 1

Figure 2

Beware:
Galvanic contact of meter housing to X-Ray generator chassis may cause wrong measuring results

(c) 2003 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED

5 ANY QUESTIONS OR SUGGESTIONS TO IMPROVE

In case you have any questions or remarks, please contact:

PMS Tools Helpdesk Mailto:helpdesk.pmstools@philips.com

Visit the Lead office Tools website at the PMS TechNet: http://technet.best.ms.philips.com
Select: CS XRD BEST > TOOLS > FSE TOOLS

Unfors contact

Head office:	info@unfors.se
Phone:	+46 31 939 970
Sales support:	sales@unfors.se
Service support:	support@unfors.se
US office:	info@unfors.com
Unfors internetsite:	http://www.unfors.com/

(c) 2003 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED